



Certificate / Certificat Zertifikat / 合格証

UEC 1210073 C001

exida hereby confirms that the:

One Series Safety Transmitter

**United Electric Controls
Watertown, MA - USA**

The manufacturer
may use the mark:



Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-7

and meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 2_H

**PFD_{AVG} and Architecture Constraints
must be verified for each application**

Revision 1.2 May 9, 2017
Surveillance Audit Due
May 1, 2020

Safety Function:

The One Series Safety Transmitter will measure pressure or temperature within the stated safety accuracy.

Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.



ANSI Accredited Program
ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#1004



John C. Yozallinas
Evaluating Assessor

[Signature]
Certifying Assessor

Systematic Capability: SC 3 (SIL 3 Capable)**Random Capability: Type B Element****SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 2_H****PFD_{AVG} and Architecture Constraints
must be verified for each application****One Series Safety
Transmitter****Systematic Capability:**

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element. This device meets *exida* criteria for Route 2_H.

IEC 61508 Failure Rates in FIT¹

Device Options	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
Pressure or Temperature, Current Output with IAW	0	76	3429	42
Pressure or Temperature, Current Output without IAW	0	78	3400	48
Pressure or Temperature, AC or DC Relay Output with IAW	1760	76	1701	41
Pressure or Temperature, AC or DC Relay Output without IAW	1734	101	1690	53
Pressure or Temperature, Status Output with IAW	1694	106	1690	46

¹ FIT = 1 failure / 10⁹ hours

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFD_{avg} considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report: UEC 1210073 R002 V1R3

Safety Manual: OneST-SM-02, ver. 02 and later



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